

REMARKS/ARGUMENTS

Claims 1-27 are pending. Claims 1, 4, 5, 9, 11, 12, 17, 18, and 20 have been amended to address the claim objections and rejections in the examiner's office action. Support for the amended claims can be found in the specification. No new matter has been added.

Section 112 Rejection of the Claims

In an office action dated January 5, 2005, the examiner rejected claim 10 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 has been amended to read, "The method of claim 1 further comprising of a memory operation consisting of" Claim 10 now has proper antecedent basis for the limitation "said memory operation."

Obviousness Rejection of the Claims

The examiner rejected claims 1-27 under 35 U.S.C. § 103(a) as being unpatentable over Dosaka et al. (U.S. patent number 5,680,363) in view of Kundu (U.S. patent number 5,692,148). Reconsideration and allowance of the claims are respectfully requested for the reasons discussed in this response.

Claim 1

Claim 1 recites an element of reading data from a column address in a row cache after moving the data into the row cache based on row address data and an initial command. No such element is taught or suggested by Dosaka. Dosaka describes in column 12, lines 22-26, "the column decoder also responds to the signal CAS by decoding the internal column address signal for selecting one of the column select lines." As the column select lines which carry the signal CAS are contained within the memory array, this shows that the column decode and read in Dosaka are being done in a memory array, not in a row cache as recited in claim 1. Similarly, Kundu does not teach or suggest reading data from a row cache after moving the data into the

row cache. The method of claim 1 is advantageous over Dosaka and Kundu in that it can reduce CAS latency. For this reason, withdrawal of the rejection and allowance of claim 1 is respectfully requested.

Claims 2-11 are dependent on claim 1 and should be allowable for at least similar reasons as claim 1. Claims 2-11 should further be allowable for the additional limitations that they recite.

Claim 12

Claim 12 describes a memory comprising means for reading data from a row cache in response to column address data and a 'read' command. No such means are taught or suggested by Dosaka. In column 13, lines 4-10, Dosaka describes a high speed mode operation where "the DRAM word line DWL which has already been selected is in the selected state, and the address buffer applies a new internal column address signal to the DRAM column decoder, and the column decoder performs the column selecting operation again in accordance with the signal CAS." Even for repeated accesses, the column select operation in Dosaka is clearly performed at the DRAM word line, not from the cache as recited in claim 12. Therefore, for at least this reason, claim 12 should be allowable.

Claims 13-22 are dependent on claim 12 and should be allowable for at least similar reasons as claim 12. Claims 13-22 should further be allowable for the additional limitations that they recite.

Claim 23

Claim 23 describes an SDRAM where the column decode and reading of data is performed in the single row cache. The prior art does not show or suggest this feature. In column 13, lines 11-16, Dosaka recites, "different memory cells are selected in the already selected DRAM word line, and data of the selected memory cells are transmitted to the pairs of I/O lines." Even during repeated memory access of nearby cells, the memory of Dosaka reads from the DRAM word line again, instead of reading from the cache as suggested by claim 23. For this reason, claim 23 should be allowable.

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PATENT

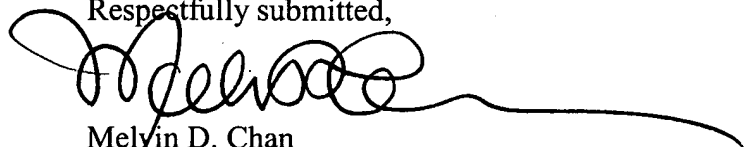
Claims 24-27 are dependent on claim 23 and should be allowable for at least similar reasons as claim 23. Claims 24-27 should further be allowable for the additional limitations that they recite.

CONCLUSION

In view of the foregoing, applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400, extension 5213.

Respectfully submitted,



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